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Category: Best Community Practice (BCP0001)

National Institutes of Health

Enterprise Architecture Standards Process

Version 1.0

Status of this Memo

This document specifies a best community practice (BCP) for the National Institutes of Health (NIH) and requests discussion and suggestions for improvements. Distribution of this memo is unlimited.

Abstract

This memo documents the process used by the NIH community for the creation of standards for information technology (IT). It defines the steps in the standardization process, the requirements for promoting a document through the steps, and the types of documents used during this process.

Table of Contents

1 Introduction

This memo documents the process used by the NIH community for the standardization of information technology architecture. The NIH standards process is an activity of the NIH enterprise architecture program that is organized and managed on behalf of the NIH community by the Office of the Chief Information Technology Architect (OCITA).

To view graphical representations of the processes described in this document, view the process models on the NIH Enterprise Architecture website at http://enterprisearchitecture.nih.gov/NRFC/.

1.1 Background and Definition of a Standard

The National Institutes of Health, an organization of Institutes and Centers, is the steward of medical and behavioral research for the Nation. In this role NIH sees a vital responsibility for information technology to maximize the benefits of biomedical research through improved collaboration among the researchers and better dissemination of the results to the medical community and the public. Enterprise IT Architecture is a key element in creating an IT environment that is both effective and efficient. The procedures in this document guide the development of the enterprise architecture in the consensus driven environment that is NIH.

The NIH enterprise architecture standards process described in this document is concerned with all consensus-driven standards that are developed as part of the NIH Enterprise Architecture for IT. In the case of standards developed by non-NIH organizations, however, the standards process normally applies to the application of the protocol or procedure in the NIH context, not to the standard itself.

In general, an NIH standard is a specification that is:

- Stable and well-understood,
- Technically competent,
- Recognizably useful in some or all parts of NIH, or is either
- Required for integration within NIH or between NIH and its partners or grounded in documented, generally accepted industry or government wide best practices or standards.

A **specification** is a written description that describes a system, system component, approach, or protocol. NIH **architecture standards** are necessary for the inter-working, portability, and reusability of NIH information systems and systems components across the enterprise. These types of specifications are written and communicated to the NIH community and adopted via the formal review process described in this document

1.2 Process Goals and Intent

The goals of the NIH standards process are:

- Technical excellence
- Adoption of proven technology in the NIH environment
- Clear, concise, and easily understood documentation
- Openness and fairness
- Timeliness
- NIH-wide distribution and use

These procedures are intended to provide a fair, open, and objective basis for developing, evaluating, and adopting NIH enterprise architecture standards. At each stage of the standardization process, a specification is repeatedly discussed and its merits debated in open meetings and via discussion groups on the NIH portal in the NIH Enterprise Architecture Community.

2 Standards Documentation

There are two, primary documentation sources for architecture standards at NIH. First, domain teams, which are assembled by the Office of the Chief IT Architect (OCITA) and comprised of IC representatives, collaborate to develop and publish architecture artifacts. These artifacts include principles, patterns, and bricks and are the core of the NIH Enterprise Architecture. Although the domain teams deliver their findings in a report format, the authoritative source for approved architecture artifacts is http://enterprisearchitecture.nih.gov. Draft documents are posted to the NIH Enterprise Architecture Community for review and comment.

The second source is the NIH Requests for Comments (NRFC) series, discussed in detail in this document. OCITA has initiated the NRFC series to serve as a collaborative process to which any NIH stakeholder may contribute. Stakeholders may include individuals, groups, and organizations. Contributions may be unsolicited.

3 Domain Team Findings

Enterprise Architecture domain teams are convened by the Chief Architect to develop standards and guidelines for IT at the NIH. The work of the domain teams is consensus-based. The domain teams produce reports that include recommended IT principles, architecture patterns and bricks, and recommendations for action. Because all ICs are invited to participate in the domain team process, it is assumed the ICs have delegated decision-making authority to their respective representatives. Therefore, it is assumed that the domain teams' recommendations have been vetted by the ICs. However, OCITA will announce via the NIH Enterprise Architecture LISTSERV and the NIH Portal when the domain teams' recommendations are published. Thereafter, all stakeholders, including the ICs will have an opportunity to review and comment on the domain teams' recommendations prior to the ARB's consideration of the domain teams' recommendations and adoption as standards.

The IT Management Committee (ITMC) Enterprise Architecture Subcommittee reviews the domain team reports, develops comments and recommendations on the disposition of the domain teams' findings, and forwards the reports with their recommendations and findings to the

Architecture Review Board (ARB). The ARB is the approval authority for the architecture recommendations contained in the reports. The IT Working Group (ITWG) is the final authority on disputed recommendations from the domain teams' findings and recommendations.

4 NIH Request for Comments (NRFC)

This NIH Request for Comments (NRFC) document series is the official publication channel for NIH standards documents, produced outside of the domain team process and other publications of the ARB, OCITA, and the NIH architecture community.

These documents are published in Adobe portable document format (PDF) on the NIH Enterprise Architecture website at http://enterprisearchitecture.nih.gov. This site is the authoritative source for this document series.

There are four sub-series in the main NRFC series: standards, best community practice, informational, and experimental.

4.1 NRFC Standards Sub-series

Some NRFCs document NIH standards. These NRFCs form the 'STD' sub-series of the NRFC series and will receive an 'STDxxxx' number, in addition to a NRFC number.

4.2 NRFC Best Community Practice Sub-series

Some NRFCs are statements of principle or an agreed upon approach to completing a process, operation, or architectural function. These NRFCs form the best community practice (BCP) sub-series and are assigned a "BCPxxxx" number, in addition to a NRFC number.

4.3 NRFC Non-standards Sub-series

Not all specifications should or will become NIH Architecture Standards or BCPs. Such non-standards track specifications are not subject to the rules for NIH standardization. Non-standards specifications may be published directly as "experimental" or "informational" NRFCs at the discretion of the Chief Architect.

4.3.1 NRFC Informational Sub-series

An "informational" specification is published for the general information of the NIH enterprise architecture community and does not represent an NIH community consensus or recommendation. The "informational" designation is intended to provide for the timely publication of a very broad range of responsible informational documents from many sources and the Chief Architect's consent

for publication. The Chief Architect must validate that the document is applicable to the NIH enterprise architecture community and does not place NIH at risk.

4.3.2 NRFC Experimental Sub-series

The "experimental" designation typically denotes a specification that is part of some research or development effort. Such a specification is published for the general information of the NIH enterprise architecture community and as an archival record of the work, subject only to the editorial discretion the Chief Architect's consent for publication. The Chief Architect must validate that the document is applicable to the NIH enterprise architecture community and does not place NIH at risk. An experimental specification may be the output of an organized NIH research effort (e.g., a research group of the NIH Intramural Program), an architecture domain team, or an individual contribution.

4.3.3 Procedures for Experimental and Informational NRFCs

Unless they are the result of architecture domain team action, informational or experimental documents should be submitted directly to OCITA at EnterpriseArchitecture@mail.nih.gov. OCITA will publish any such documents to the NIH Portal. OCITA will wait ten business days after this publication for comments before proceeding further. OCITA is expected to exercise good judgment concerning the editorial suitability of an informational or experimental NRFC and may refuse to publish a document that, in the expert opinion of the Chief Architect, is unrelated to NIH architecture activity or falls below the technical and/or editorial standard for NRFCs. After the minimum ten business days have expired and no other further action is initiated by a stakeholder, OCITA may publish the NRFC to the authoritative source for enterprise architecture standards http://enterprisearchitecture.nih.gov. Generally NRFCs in these sub-series do not require ARB approval.

However, OCITA will ensure that non-standards experimental and informational designations are not misused to circumvent the standards processes. As such, OCITA will refer to the ARB any document submitted for experimental or informational publication, which, in the opinion of OCITA, may be related to work being done, or expected to be done, within the NIH enterprise architecture community. The ARB shall review such a referred document within a reasonable period of time, and recommend either that it be published as originally submitted or referred to OCITA as a contribution to the NIH Enterprise Architecture Standards Process.

If the ARB recommends that the document be brought within the standards sub-series but the author declines to do so, or if the ARB considers that the document proposes something that conflicts with, or is actually inimical to, an established architectural effort, then the document may still be published as an experimental or informational NRFC. In these cases, however, OCITA may insert an appropriate disclaimer into the NRFC either in or immediately following the "Status of this Memo" section in order inform stakeholders about the circumstances of its publication.

4.4 Draft NRFCs

During the development of a specification or a standard, draft versions of the NRFC document are available for review and comment on the NIH Portal in the NIH Enterprise Architecture community. Recommended changes and comments must be submitted in the discussion area, which is attached to the document, to ensure an open, collaborative approach to standards specification.

A draft, proposed, or revised NRFC will be moved to an archived status, if it has not been approved within 6 months of its submission to OCITA in order to reduce overhead in the administration of the process and confusion concerning the status of unapproved documents. In the case of a revision that has not been approved, the previous version will remain the authoritative source until it is classified as obsolete or retired. Subsequent to a document being deleted, stakeholders may resubmit a newly revised version of the document at a later date.

The NRFC author is the only authorized editor for substantive changes to an NRFC unless the NRFC author has appointed a delegate. An NFRC author must submit it in the format prescribed in NRFC0003, "Instructions to NRFC Authors." A template (NRFC0009) is available on the NIH Portal. OCITA will appoint an NRFC editor to proofread the document for grammar, consistency, and readability. In the case of a minimal number of minor errors of these types, the NRFC editor may make the change to the document but must document and notify the author of the changes.

Standards sub-series NRFCs should include the rationale, justification, or decision criteria and analysis that supports the proposed standard.

A draft NRFC in the standards sub-series may not become a standard without the approval of the ARB. However, a draft NRFC in the BCP, informational, or experimental sub-series may be published after a minimum ten business-days review period on the NIH Portal.

All draft NRFCs will contain a "Draft" stamp or watermark.

4.5 Obsolete NRFCS

A specification that has been superseded by a more recent specification or is for any other reason considered to be obsolete is classified as "Obsolete." Any stakeholder may recommend that an NRFC be classified as obsolete.

OCITA will maintain an archive of obsolete NRFCs indefinitely on the NIH Portal. The NIH Portal is the authoritative source for obsolete NRFCs. However, a record of the obsolete NRFC will remain on the enterprise architecture website with the classification of "Obsolete." OCITA will annotate the obsolete NRFC with the reason it is obsolete and a citation for the mechanism, such as a new NRFC, that obsoletes it.

The decision authority for classifying a BCP, informational, and experimental NRFC as obsolete is the Chief Architect, whose decisions may be appealed to the ARB for final disposition. The

decision authority for NRFCs in the standards sub-series is the ARB, whose decisions may be appealed to the ITWG. The final disposition of an obsolete NRFC should be communicated to the NIH enterprise architecture community and to the NRFC author.

5 The NRFC Standards Sub-series Process

5.1 Initiation of Action

A specification that is intended to be documented in standards sub-series NRFC must be posted in the NIH Enterprise Architecture community on the NIH Portal. An NFRC author must submit it in the format prescribed in NRFC0003, "Instructions to NRFC Authors." A template (NRFC0009) is available on the NIH Portal and from http://enterprisearchitecture.nih.gov.

The NRFC shall be subject to review by the community for no less than ten business days. After this time period has elapsed, the Chief Architect will initiate one of the following actions:

1. Return the NRFC to the author for additional information, clarification, or significant formatting, grammar, or style revisions.
2. Refer the NRFC to a domain team or ad hoc working group.
3. Extend the review period.
4. Forward the NRFC to the ARB for consideration.

If the NRFC requires review by a domain team or ad hoc working group, the respective team must make a recommendation to the ARB on the disposition of the NRFC.

5.2 Typical Standards Review and Approval Schedule

Regardless of the duration of the review period for the NRFC, OCITA shall provide a five business day advance notice of the expiration of the review period. As an example, a document is posted to the NIH portal, and OCITA announces the beginning of the review period. Five business days later, OCITA announces that there are five days remaining in the review period. At the conclusion of the minimum ten business days, OCITA may close the review period, and the NRFC author may incorporate recommendations into the final NRFC. Thereafter, the NRFC author or OCITA may request the ITMC Enterprise Architecture Subcommittee and the ARB consider the NRFC for adoption as a standard. The ITMC Enterprise Architecture Subcommittee may make a recommendation to the ARB. However, the ARB is the decision authority for a standard or specification.

The ITMC Enterprise Architecture Subcommittee and the ARB may consider all pending standards sub-series NRFCs during the regular course of business as outlined in these bodies' governing charters.

The NRFC author or a delegated representative shall be prepared to brief the ARB or other architecture governing bodies that are considering a proposed standard. Briefing topics might

include but are not limited to the justification of a proposed standard, supporting decision analysis, and any unresolved conflicts. Regardless of whether or not the governing body requires the author to brief, a document supplement must be included describing any applicable decision analysis and the status of unresolved conflicts.

5.2.1 Publication

If a standards action is approved, notification is sent to the OCITA and copied to the ARB and ITMC with instructions to publish the specification as an NRFC.

OCITA will maintain a minimum biweekly status report on the NIH Portal, describing the disposition of pending and approved NRFCs.

The enterprise architecture website http://enterprisearchitecture.nih.gov is the authoritative source for approved NRFCs.

5.3 Revising a Standard

A new version of an established NIH enterprise architecture standard must progress through the full NIH architecture standardization process as if it were a completely new specification. Once the new version receives the appropriate approvals, it will usually replace the previous version, which will be moved to historical status. The new version will retain the NRFC and STD number of the previous version.

However, in some cases, at the discretion of the Chief Architect, both versions may remain as NIH enterprise architecture standards to honor the requirements of an installed base. In this situation, the relationship between the previous and the new versions must be explicitly stated in the text of the new version.

5.4 Retiring a Standard

As technology changes and matures, it is possible for a new standard or specification to be so clearly superior technically that one or more existing standards or specifications for the same function should be retired. In this case, or when it is felt for some other reason that an existing standard or specification should be retired, the ARB shall approve a change of status of the old specification(s) to “Obsolete.” OCITA will allow for ten business days after notification to NIH stakeholders before classifying retired standards as “Obsolete.” A request to retire an existing standard can originate from a domain team, an ad hoc working group, or another NIH stakeholder.

5.5 Conflict Resolution and Appeals

Disputes are possible at various stages during the standards process. To achieve the goals of openness and fairness, such conflicts must be resolved by a process of open review and discussion. This section specifies the procedures that shall be followed to address standards issues that cannot be resolved through the normal processes whereby domain teams and ad hoc working groups and other process participants ordinarily reach consensus.

5.5.1 Domain Team and Ad Hoc Working Group Disputes

Any stakeholder may disagree with a domain team or ad hoc working group recommendation regardless of affiliation with the domain team or ad hoc working group. Disagreements may arise because a stakeholder feels his/her own views have not been adequately considered or the body has made an incorrect technical choice that places the quality or integrity of the bodies' products in significant jeopardy.

A person who disagrees with an architecture domain team or ad hoc working group recommendation shall always first discuss the matter with the architecture domain team's or ad hoc working group's chair(s), who may involve other members of the architecture domain team or ad hoc working group in the discussion.

If the disagreement cannot be resolved, any of the involved parties may notify OCITA. OCITA shall attempt to resolve the dispute.

If the disagreement cannot be resolved by OCITA any of the parties involved may then appeal to the ARB. The ARB shall then review the situation and attempt to resolve it in a manner of its own choosing.

The ARB decision is final with respect to the question of whether or not the standards processes have been followed and with respect to all questions of technical merit.

5.5.2 Process Failures

This document sets forward procedures to ensure openness and fairness in the standards process and the technical viability of the standards. OCITA is the principal agent of the NIH for this purpose, and it is OCITA that is charged with ensuring that the required procedures have been followed, and that any necessary prerequisites to a standards action have been met.

If an individual should disagree with an action taken by the OCITA in this process, that person should first discuss the issue with the Chief Architect. If the Chief Architect is unable to satisfy the complainant then the OCITA as a whole should re-examine the action taken, along with input from the complainant, and determine whether any further action is needed. The OCITA shall issue a report on its review of the complaint to the ARB.

Should the complainant not be satisfied with the outcome of the OCITA review, an appeal may be lodged with the ARB. The ARB shall then review the situation and attempt to resolve it in a

manner of its own choosing and report to the NIH Chief Information Officer (CIO) on the outcome of its review.

If circumstances warrant, the ARB may direct that an OCITA decision be annulled, and the situation shall then be as it was before OCITA rendered the decision. The ARB may also recommend an action to OCITA or make other recommendations as it deems fit. However, the ARB may not preempt the role of OCITA by issuing a decision premature to OCITA's opportunity to render a decision.

The ARB's decision is final with respect to the question of whether or not the documented standards process has been followed.

5.5.3 Questions of Applicable Procedure

Further recourse is available only in cases in which the processes are claimed to be inadequate or insufficient to the protection of the rights of all parties in a fair and open process. Claims on this basis may be made to the IT Working Group (ITWG). The NIH CIO shall acknowledge such an appeal within 10 business days and shall at that time advise the petitioner of the expected duration of the ITWG's review of the appeal. The ITWG shall review the situation in a manner of its own choosing and report to OCITA on the outcome of its review.

The ITWG's decision upon completion of their review shall be final with respect to all aspects of the dispute.

5.5.4 Appeals Procedure

All appeals must include a detailed and specific description of the facts of the dispute.

All appeals must be initiated within two months of the public knowledge of the action or decision to be challenged.

At all stages of the appeals process, the individuals or governing bodies responsible for making the decisions have the discretion to define the specific procedures they will follow in the process of making their decision.

In all cases a decision concerning the disposition of the dispute, and the communication of that decision to the parties involved, must be accomplished within a reasonable period of time.

6 Best Community Practice (BCP) Process

The BCP sub-series of the NRFC series is designed to be a way to standardize practices and the results of community deliberations. A BCP document is subject to the same basic set of procedures as is a standards document and thus is a vehicle by which stakeholders can define and ratify the

community's best current thinking on a statement of principle or on what is believed to be the best way to perform some operations or architecture process function.

Historically NIH architecture standards have generally been concerned with the technical specifications for hardware, data, and software required for interoperation within the NIH community. However, since the NIH is composed of systems operated by a variety of organizations, with diverse goals and rules, good user service requires that the operators and administrators of the NIH information services follow some common guidelines for policies and operations. While these guidelines are generally different in scope and style from architecture standards, their establishment needs a similar process for consensus building.

ICs have a role to play in the enterprise architecture process, independent of domain teams and ad hoc working groups. As leaders in the NIH technical community, the ICs should have an outlet to propose ideas to stimulate work in a particular area, to raise the community's sensitivity to a certain issue, to make a statement of architecture principle, or to communicate their thoughts on other matters. The BCP sub-series creates a smoothly structured way for the ICs to insert proposals into the consensus-building machinery of the NIH architecture while gauging the community's view of that issue.

Finally, the BCP series may be used to document the operation of the architecture program itself. For example, this document defines the NIH enterprise architecture standards process and is published as a BCP.

6.1 BCP Review Process

An IC or other NIH stakeholder may submit BCP to OCITA for review. After a ten business days waiting period and after OCITA has approved the document, the process ends and the document is published. The resulting document is viewed as having the technical approval of the Chief Architect.

Because BCPs are meant to express community consensus but are arrived at more quickly than standards, BCPs require particular care. Specifically, BCPs should not be viewed simply as stronger informational NRFCs but rather should be viewed as documents suitable for content different from informational NRFCs.

7 Non-NIH Standards and Specifications

To avoid conflict between competing versions of a specification, the NIH Enterprise Architecture community will not publish a standards sub-series NRFC for a standard or specification that is a prevalent government, departmental, or industry wide standard or specification.

However, a standards sub-series NRFC may specify a preferred NIH standard or specification, when such non-NIH standards are incompatible or a source of considerable risk or cost to NIH.

Furthermore, NIH may publish an informational sub-series NRFC to increase awareness or generate discussion on a non-NIH standard or specification.

8 Notices and Record Keeping

Each of the domain teams, ad hoc working groups, and governing IT bodies involved in the development and approval of standards shall publish minutes from meetings in the NIH Enterprise Architecture community on the NIH Portal. OCITA shall be the enforcement body for this requirement.

OCITA will ensure that the following events are announced publicly via the NIH Enterprise Architecture LISTSERV and on the NIH Portal: publication of domain team recommendations, process approvals and disapprovals, and first and last call announcements for review as required for each of the NRFC sub-series.

OCITA shall publicly announce via the NIH Enterprise Architecture LISTSERV the ARB's pending consideration of an NRFC or other standard or specification. The announcement will include meeting details, an agenda, and any references (either attachments or public links) to ensure all NIH stakeholders are able to participate in the meeting.

The record of an organization's standards-related activity shall include at least the following:

- The charter of the organization (or a defining document equivalent to a charter);
- The minutes of meetings, which will include discussion topics, key decisions with justification, known assumptions; and
- Attendance records.

OCITA will assist, monitor, and enforce the maintenance and publication of NIH Enterprise Architecture standards process activities. However, each domain team, ad hoc working group, and governing body shall be responsible for maintaining their own minutes, communications, email lists, archives, etc. in the NIH Enterprise Architecture community on the NIH Portal.

9 Process Exceptions

If circumstances dictate, a stakeholder may request an exception to the processes outlined in this document. The ARB may grant a process exception, if it determines that the likely benefits to the NIH outweigh the costs of not following the standards process. The ARB may also accelerate or modify the process if the risks to the NIH, the public, or its partners are imminent. In exercising this discretion, the ARB shall consider:

- The technical merits of the standard;
- The justification for granting the process exception;
- The decision criteria considered in granting the process exception, including their relative weights;
- Alternatives to granting the process exception;
- The collateral and precedent setting effects of granting a process exception; and
- The risks associated with granting or not granting the process exception, including an assessment of the probability and impact of each identified risk.

The proposed process exception must include a problem statement, a specific reference to the process step or requirement to which the exception applies, and the results of the ARB's considerations referenced above. The ARB must provide for NIH-wide comment on the proposed process exception by announcing via the NIH Enterprise Architecture LISTSERV the meeting information, agenda, relevant references, the proposed specification or standard, and the proposed process exception.

10 Process Change Control

The scope of the process exception procedure is limited to a single standard or specification.

Substantive, permanent changes to the processes outlined in this document require the recommendation of either the Chief Architect or a member of the ARB. The recommended change shall be announced and posted for NIH-wide comment for no less than one calendar month. The ARB must consider all comments and recommendations in making the decision to modify this governing process.

The ARB is the decision-making governing body for changes to this process. However, a stakeholder may appeal the decision to the ITWG. The ITWG is the final authority on any changes to this governing process.

11 Intellectual Property Rights

Authors of NIH Enterprise Architecture standards or other content shall observe all laws governing intellectual property rights and shall credit all sources of intellectual property in all documentation or content and must compensate the intellectual property owner when necessary. This process is governed by the following requirements:

- To the extent that the submission is or may be subject to copyright, the contributor(s), the organization(s) he or she represents, if any, and the owners of any proprietary rights in the contribution grant an unlimited perpetual, non-exclusive, royalty-free, worldwide right and license to the NIH under any copyrights in the contribution. This license includes the right to copy, publish and distribute the contribution in any way, and to prepare derivative works that are based on or incorporate all or part of the contribution, the license to such derivative works to be of the same scope as the license of the original contribution.
- The contributor(s) acknowledges that the NIH has no duty to publish or otherwise use or disseminate any contribution.
- The contributor(s) grants permission to reference the name(s) and address(es) of the contributor(s) and of the organization(s) he or she represents, if any.
- The contributor(s) represents that the contribution properly acknowledges major contributors.
- The contributor(s), the organization(s), if any, he or she represents and the owner(s) of any proprietary rights in the contribution, agree that no information in the contribution is confidential or proprietary and that the NIH and its affiliated organizations may freely disclose any information in the contribution.
- The contributor(s) represents that he or she has disclosed the existence of any proprietary or intellectual property rights in the contribution that are reasonably and personally known to the contributor(s). The contributor(s) does not represent that he or she personally knows of all potentially pertinent proprietary and intellectual property rights owned or claimed by the organization(s) he represents, if any, or third parties.
- The contributor(s) represents that there are no limits to the contributor's ability to make the grants, acknowledgments and agreements above those that are reasonably and personally known to the contributor(s).

By ratifying this description of the NIH Enterprise Architecture process, the NIH warrants that it will not inhibit the traditional open and free access by the NIH community to NIH Enterprise Architecture documents for which license and rights have been assigned according to the procedures set forth in this section, including NRFCs, draft documentation, or any other content. This warrant is perpetual and will not be revoked by the NIH or its successors or assigns.

11.1 Intellectual Property Rights and Standards Documents

Where any patents, patent applications, or other proprietary rights are known, or claimed, with respect to any specification in the standards sub-series, and brought to the attention of the OCITA, the OCITA shall not advance the specification without including in the document a note indicating the existence of such rights, or claimed rights. Where implementations are required before advancement of a specification, only implementations that have, by statement of the implementers, taken adequate steps to comply with any such rights, or claimed rights, shall be considered for the purpose of showing the adequacy of the specification.

The NIH disclaims any responsibility for identifying the existence of, or for evaluating the applicability of, any claimed copyrights, patents, patent applications, or other rights in the fulfilling of the its obligations and will take no position on the validity or scope of any such rights.

Where the OCITA knows of rights, or claimed rights, the Chief Architect shall attempt to obtain from the claimant of such rights, a written assurance that upon approval by the ARB of the relevant NIH architecture standards sub-series specification(s), NIH will be able to obtain the right to implement, use and distribute the technology or works when implementing, using or distributing technology based upon the specific specification(s) under openly specified, reasonable, non-discriminatory terms. The domain team proposing the use of the technology with respect to which the proprietary rights are claimed may assist the Chief Architect in this effort. The results of this procedure shall not affect advancement of a specification in the standards sub-series, except that the ARB may defer approval where a delay may facilitate the obtaining of such assurances. The results will, however, be recorded by the NIH CIO, and made available. The ARB may also direct that a summary of the results be included in any published NRFC containing the specification.

11.2 Determination of Reasonable and Non-discriminatory Terms

The ARB will not make any explicit determination that the assurance of reasonable and non-discriminatory terms for the use of a technology has been fulfilled in practice. It will instead use the normal requirements for the advancement of NIH Architecture Standards to verify that the terms for use are reasonable. If the implementation of the specification that is required to advance from Proposed Standard to Draft Standard has been produced or if the "significant implementation and successful operational experience" required to advance from Draft Standard to Standard has been achieved the assumption is that the terms must be reasonable and to some degree, non-discriminatory. This assumption may be challenged during the Last-Call period.

11.3 Notices

Standards sub-series documents shall include the following notice:

> The NIH takes no position regarding the validity or scope of any intellectual property or other rights that might be claimed to pertain to the implementation or use of the technology described in this document or the extent to which any license under such rights might or might not be available; neither does it represent that it has made any effort to identify any such rights. Information on the NIH's procedures with respect to rights in standards and standards-related documentation can be found in [location to be determined]. Copies of claims of rights made available for publication and any assurances of licenses to be made available, or the result of an attempt made to obtain a general license or permission for the use of such proprietary rights by implementers or users of this specification can be obtained from OCITA.

OCITA encourages all interested parties to bring to its attention, at the earliest possible time, the existence of any intellectual property rights pertaining to NIH Enterprise Architecture standards. For this purpose, each standards document shall include the following invitation:

> The NIH invites any interested party to bring to its attention any copyrights, patents or patent applications, or other proprietary rights, which may cover technology that may be required to practice this standard. Please address the information to the NIH Chief Architect.

The following copyright notice and disclaimer shall be included in all NIH Enterprise Architecture standards-related documentation:

> This document and the information contained herein is provided on an "AS IS" basis and THE NATIONAL INSTITUTES OF HEALTH DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Where the OCITA is aware at the time of publication of proprietary rights claimed with respect to a standards track document, or the technology described or referenced therein, the document shall include the following notice:

> The NIH has been notified of intellectual property rights claimed in regard to some or all of the specification contained in this document. For more information consult the online list of claimed rights.

12 Delegated Authority in the Standards Process

Individual(s) or organization(s) must not misrepresent any other individual(s) or organization(s).

13 Confidentiality

NIH Enterprise Architecture standards, best community practices, documentation, meeting minutes, discussions, communications, decisions, and all other content are a public record and shall not be afforded any level of confidentiality. The NIH General Counsel must approve exceptions to this requirement.

14 Acknowledgements

This document has extensively followed the model of IETF RFC 2026. It has been modified to make it applicable to the NIH architecture needs. We would like to acknowledge all of those who have contributed to the processes that develop NIH Enterprise Architecture Standards. The NIH architecture community hopes to follow the model of openness and fairness that IETF has established.

15 Definitions of Terms Referenced in this Document

Ad Hoc Working Group - a group chartered by the Chief Architect to work on a specific specification, set of specifications, or topic that falls outside of the NIH Architecture Taxonomy.

Architecture Review Board (ARB) - an appointed group chaired by the NIH CIO that assists in the management of the enterprise architecture standards process. The ARB is responsible for the governance of the NIH Enterprise Architecture and is the standards approval board for it.

Brick - physical building block of the architecture that specifies the technology or technologies to be used in the architecture.

Domain Team - a group chartered by the Chief Architect for the specific purpose of formulating principles, standards, artifacts, and recommendations for the areas of the NIH Enterprise Architecture specified in the taxonomy.

Information Technology Management Committee (ITMC) - established by the NIH CIO. Composed of the senior IT officials from each IC, the ITMC advises the NIH CIO on IT management and planning and serves as a communication vehicle between the IC and the CIO on IT issues. Its purpose is to: (1) communicate each ICs needs and range of interests in IT to the CIO and among the IC community so that enterprise IT solutions can be developed and managed to best serve the NIH scientific and administrative missions; (2) effectively communicate ITMC policy and architectural recommendations to the ICs; (3) provide a central point of reporting and coordination for the activities of NIH IT committees and working groups; (4) establish a forum that effectively integrates the unique needs and operations of the program/business process and IT technical communities; (5) provide the CIO with the IC perspective on issues/solutions that involve the management and implementation of NIH IT programs; and (6) serve as the intermediate link between the IT subcommittees and the NIH CIO.

Information Technology Working Group (ITWG) - formerly the IT Board of Governors (ITBOG); established by the NIH Director as an advisory group to the NIH Director and CIO on IT issues and oversight of IT management at NIH. The Board's purpose is to (1) review and make recommendations on the IT activities and priorities of the NIH and (2) assess and advocate resources to implement those priorities.

Interoperable - the ability to interoperate over a data communications path.

ITMC Enterprise Architecture Subcommittee - established by the ITMC; provides the NIH and IC CIOs a forum for participation, leadership, and direction on the NIH Enterprise Architecture; works closely with the NIH CIO, the Chief Architect and the ARB to help develop NIH-wide and enterprise architectures that reflect the business and technology drivers of NIH and its constituent IC's. It is responsible for providing guidance and IT input into that process.

Office of the Chief Information Technology Architect (OCITA) - the office led by the Chief Architect that is chartered as the custodial body of the NIH Enterprise Architecture and the processes that govern it.

Pattern - a logical model of technology; a design idea that can be reused and leveraged across the enterprise.

Principle - a high level statement of a fundamental value that guides Information Technology (IT) decision-making and activities, which can then be consistently planned, implemented and maintained.

16 Changes

Version	Date	Change	Authority	Author of Change
0.0	August 12, 2003	Original Document.		Jack Jones
0.1	August 1, 2004	Changed website address.	Jack Jones	Steve Thornton
0.2	September 21, 2004	Major document revision (see NIH Portal for previous versions).	Jack Jones	Steve Thornton
0.3	November 19, 2004	-Minor text edits throughout. Clarified decision authority of Domain Teams. -Added section on Provisional Architecture Artifacts (new Section 5.6). -Change of author. -Added to definitions list.	Jack Jones	Steve Thornton
0.4	December 6, 2004	-Minor text edits. -Included requirement for author to include and brief concerning unresolved conflicts and decision analysis. -Described the process for NRFCs that have not been acted on in six months. -Further clarified announcement requirements to include the LISTSERV.	Steve Thornton	Steve Thornton

Version	Date	Change	Authority	Author of Change
0.5	January 21, 2005	-Defined specification and standard. -Removed provisional brick paragraph, since it does not prescribe a process different than a standards sub-series NRFC. -changed “published” to “post” as appropriate	Jack Jones	Steve Thornton
1.0	March 9, 2005	-Changed process goal (section 1.2) from “prior implementation and intent” to “adoption of proven technology in the NIH environment.” -added requirement for OCITA to annotate obsolete NRFC with reason and citation. -incorporate requirement for OCITA to announce publication of domain team recommendations	Architecture Review Board (3/9/2005 meeting)	Steve Thornton

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Appendix A: Acronyms

ANSI: American National Standards Institute
ARB: Architecture Review Board
BCP: Best Community Practice (also BCP NRFC document label)
CIO: Chief Information Officer
IC: Institutes and Centers
IETF: Internet Engineering Task Force
IT: Information Technology
ITMC: Information Technology Management Committee
ITWG: Information Technology Working Group
PDF: Portable Document Format
OCITA: Office of the Chief Information Technology Architect
NRFC: NIH Request for Comments
STD: a component of the standards sub-series of NRFCs